Kimley-Horn and Associates, Inc.

PINAL COUNTY CORRIDORS DEFINITION STUDY

Contract T0449-0001
Task Assignment TPD08-04

Work Plan

September 27, 2004

Task 1 — Finalize Work Plan

Purpose

The purpose of this task is to finalize the work plan for the study and define the limits of the study areas. A public involvement plan will be developed and finalized in this task.

Approach

The Kimley-Horn team will present the proposed work plan (as modified by initial comments from ADOT) at the first TAC meeting. Using input from the TAC and guidance by the ADOT Project Manager, the work plan, schedule, study area delineation, and budget will be finalized, documented, and presented to the ADOT Project Manager for approval. The final work plan will be documented in Technical Memorandum 1 and distributed to ADOT and the TAC.

During this task, a public involvement plan will be developed in consultation with the ADOT Project Manager and presented to the TAC at the first TAC meeting. Using input from the TAC and guidance by the ADOT Project Manager, the public involvement plan will be finalized, documented, and presented to the ADOT Project Manager for approval. The final public involvement plan will be documented in Technical Memorandum 1 and distributed to ADOT and the TAC.

Deliverables:

- TAC Meeting Presentation Graphics and Study Area Delineations
- TAC Meeting Summary
- Technical Memorandum 1, Final Work Plan

Task 2A — Existing Conditions

Purpose

The purpose of this task is to compile available information and data, and prepare a summary of the existing conditions within the corridor study areas defined in Task 1. This summary is intended to provide an overview of land uses, roadway conditions, travel data, crash history, traffic operations, access management, multi-modal and alternative mode activities, socio-economic conditions, and environmental assessments in sufficient detail that the corridor needs and deficiencies can be evaluated during future tasks. Existing conditions data will be drawn from SEMNPTS and other studies. Only limited supplemental data collection is anticipated for this task.

Existing conditions and corridor-specific needs and deficiencies will be documented in Summary Report 1, Existing and Future Corridor Features.

As a starting point, areas within which existing data will be compiled are immediately adjacent to or on SEMNPTS corridor recommendations that follow existing roadways and within one to two miles where recommendations do not follow existing roadways. Land use information will be limited to corridor data needed for developing travel demand models and those developments which impact corridor traffic operations.

Approach

During this task, GIS will serve as the principal clearinghouse for all data as well as the primary analysis tool. Major corridor inventory activities will include obtaining:

- Land use information, including existing zoning, and in-place and approved major commercial, industrial, and residential developments will be obtained from jurisdictions along the corridors.
- Roadway conditions including laneage, pavement and bridge sufficiency ratings, speed limits, major intersection traffic control, current daily traffic volumes, functional classification, bicycle suitability, and other relevant existing roadway data information will be obtained and organized in a GIS format. This information is anticipated to come primarily from ADOT, MAG, CAAG, Maricopa County, and Pinal County. As part of this task the most recent Highway Performance Monitoring System (HPMS) data will be obtained from ADOT and reviewed. The HPMS database will be a good source of standardized data that can be used to evaluate the corridor. Fields within this database that will be of particular interest to this study include the following roadway attributes: right-of-way, jurisdictional responsibility, functional class, drainage adequacy, number of at-grade rail crossings, as well as others.
- Travel data in the form of daily traffic and truck volumes will be gathered and displayed for the existing roadways in each corridor.
- Crash history data in existing studies will be supplemented with recent crash data from ADOT to a obtain crash history for the most recent available 5-year period. Crashes will be summarized in data summary tables and crash location maps will be prepared using GIS. Corridor segments and major intersections will be evaluated using the average number of crashes per year and the crash rate (crashes per million vehicles of travel) for each intersection will be determined. Locations identified as having abnormally high numbers of crashes per year or abnormally high crash rates will be subjected to additional analysis to determine if an identifiable crash pattern exists. Near-term safety countermeasures will be recommended for locations identified as having an identifiable crash pattern.
- Traffic operations for existing conditions will be determined based on existing daily traffic volumes and roadway characteristics. Level of service will be documented for corridor segments and major intersections based on planning thresholds. Locations which have unacceptable existing levels of service will be identified.
- Access management will be documented both from a policy standpoint and a traffic operations standpoint. Relevant issues that will be addressed are: type of crossroad and driveway access, frequency of access points, consistency of access design, crash history, and traffic volumes.
- Multi-modal and alternative mode activities will be identified along the corridors. Available information related to alternative mode routes, frequency, accessibility, capacity, and ridership

will be summarized by mode type. Locations of any existing multi-modal facilities along the corridors will be identified.

- Socio-economic conditions will be collected and evaluated both for use by others in developing future traffic projections and to establish a database to conduct analysis necessary to address the Title VI and Environmental Justice requirements of Executive Order 12898. A description of existing and future development will be achieved by creating thematic maps using available MAG and Pinal County traffic analysis zone data and census tract data.
- Environmental data will be gathered from available databases and compiled using GIS overlays. The analysis will be conducted using the following existing environmental data:
  - *Topography, Drainage, and Floodways* — The environmental team will review aerial photography and USGS 7.5 minute quadrangles to make a preliminary determination of the potential for waters of the U.S. along the corridors that will be subject to Sections 401 and 404 of the Clean Water Act. This evaluation will not include the preparation of a jurisdictional delineation or a field review. The team will also review Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) to determine the existence of mapped floodways along the corridors.
  - *Cultural Resources* — A review of the AZSITE database will be conducted to gather information regarding the location of cultural resources along the corridors. The cultural resources evaluation will focus on previous coverage along the corridors, the types and number of sites found, the presence/absence of 4f cultural resources, and overall cultural sensitivity.
  - *Protected Wildlife and Plant Species* — A review of the current list of threatened and endangered species will be conducted to determine if designated critical habitat for any of the listed species occurs along the corridors. The team will also contact the Arizona Game and Fish Department to request a Heritage Data Management System list of sensitive species occurrences that have been documented along the corridors.
  - *Hazardous Materials Sites* — Available contamination databases located on the Arizona Department of Environmental Quality and U.S. Environmental Protection Agency websites will be reviewed. The contamination review will be limited to the following databases: Arizona Department of Environmental Quality (ADEQ) Leaking Underground Storage Tank (LUST) Database, Arizona Superfund Program List, including Water Quality Assurance Revolving Fund (WQARF) and potential WQARF, National Priority List (NPL), and Department of Defense (DoD) sites, and Resource Conservation and Recovery Act (RCRAinfo) Large Quantity Generators and Treatment, Storage, Disposal Facilities
  - *Indian Reservations* — Land jurisdiction maps will be reviewed to identify Indian reservations along the corridors.
  - *Aircraft Operations* — Airports within the vicinity of the study area will be contacted to obtain aircraft operations information. Commercial, military, and general aviation airports will be included.
  - *Parklands and Open Space* — The environmental team will review available land use and zoning maps to determine the presence of existing or planned parklands or designated open space along the corridors.

- *Sensitive Receivers for Noise Impacts* — The environmental team will review available land use and zoning maps and aerial photography to determine the presence of sensitive receivers for noise impacts. This evaluation will not include noise analysis.
- *Prime, Statewide, and Other Protected Farm Land Soils* — The environmental team will review soil surveys of the study area and Natural Resource Conservation Service lists of protected farm land soils to determine the potential for protected farm land soils along the corridors.

Deliverables:

- Existing conditions summaries and GIS data layers for use in needs assessment, feasibility analysis, presentations, and reports.
- Existing conditions documentation for Summary Report 1, Existing and Future Corridor Features.

Task 2B — Future Conditions

Purpose

The purpose of this task is to prepare a summary of future conditions along the corridors and identify potential deficiencies for the currently planned transportation system within the corridor. This task is intended to provide an overview of future land uses, programmed/planned roadway improvements, travel demand volumes, traffic operations, access management, multi-modal and alternative mode needs, and socio-economic conditions for 2010, 2020, and 2030. All future conditions data resulting from this task will be included in Summary Report 1, Existing and Future Corridor Features.

As a starting point, areas within which existing data will be compiled are immediately adjacent to or on SEMNPTS corridor recommendations that follow existing roadways and within one to two miles where recommendations do not follow existing roadways. Land use information will be limited to corridor data needed for developing travel demand models and those developments which impact corridor traffic operations.

Approach

As in Task 2A, GIS will serve as the primary analysis tool. Major analyses and activities will include the following:

- Future land use information, including zoning and population and employment estimates, will be obtained from jurisdictions along the corridors.
- Programmed/planned roadway improvements will be identified for the corridors based on available documentation. Pertinent information will include future roadway laneage, speed limits, major intersection traffic control, functional classification, designations within study area jurisdictional transportation plans, and other relevant roadway data. This information is anticipated to come primarily from ADOT, MAG, CAAG, Maricopa County, and Pinal County.
- Travel demand volumes will be developed by others using corridor information compiled in this study for existing and future conditions. The outcome of base year and future year no-build

scenarios model runs will be used to establish current and expected future travel demand patterns in the study area.

- Traffic operations will be determined along the corridors based on 2010, 2020, and 2030 conditions. This analysis will include the projected travel demand volumes and the programmed/planned roadway improvements. Level of service will be documented for corridor segments and major intersections. Locations in which level of service is determined to be unacceptable will be identified.
- Access management will be documented both from a policy standpoint and a traffic operations standpoint. Relevant issues that will be addressed are: type of crossroad and driveway access, frequency of access points, consistency of access design, and projected traffic volumes.
- Multi-modal and alternative mode needs will be determined along the corridors. The future needs assessment will be based on planned expansion of current operations, historic use of existing alternative mode facilities, and overall trends in multi-modal travel.
- Socio-economic conditions for future years will be evaluated both for the purpose of describing the intensity of existing and anticipated future development. A description of future development will be achieved by creating thematic maps using available MAG and Pinal County TAZ data and census tract data.

Deficiencies along the corridors will be determined based on the analysis completed during the Task 2A and 2B and applied to currently planned transportation improvements along the corridors for the following general criteria:

- Ability to meet future travel demand
- Impact to environmental and cultural resources
- General impact to protected populations
- Ability to accommodate multi-modal
- Compliance with transportation objectives described in study area jurisdictional transportation plans and policies

The purpose of defining these deficiencies will be to provide a baseline for use in evaluation alternative planning-level corridor definitions during Task 4.

Deliverables:

- Future Conditions GIS data layers for use in feasibility analysis, presentations, and reports
- Documentation for Summary Report 1, Existing and Future Corridor Features

Task 3 —Round One of Public Meetings and Summary Report 1

ADDITIONAL DETAILS ARE INCLUDED IN THE PUBLIC INVOLVEMENT PLAN.

Purpose

The purpose of this task is to conduct public meetings to introduce the public to the study, inform the public on the status of the study, present information on existing and future conditions, and solicit public input on corridor issues and needs. As part of this task, Summary Report 1 will be

prepared, documenting existing and future corridor conditions, deficiencies, needs, and public comments received during the first round of public meetings.

Approach

This task will implement the public involvement plan approved in Task 1. For the purposes of demonstrating our understanding and approach to public involvement, we propose that the first round of public meetings be conducted in month 4 of the study at four locations and that each meeting present information for both the East Valley Corridor and the Apache Junction/Coolidge Corridor. General locations of the meetings include:

- Apache Junction
- Coolidge / Casa Grande / Eloy
- Queen Creek / Sun Lakes
- Gila River Indian Community

We propose that each meeting include a brief presentation, a questions/answer period, and an open house format for responding to public comments and concerns. The purpose of the first round of public meetings will be to obtain public input on issues associated with each general corridor definition. During the initial public meetings information prepared during the first two tasks of the study will be presented. Particular attention will be given to presenting the information on existing and future corridor features. The same information will be presented at each of the four public involvement meetings. The preparation of public involvement exhibits and presentations will be the responsibility of the Kimley-Horn team. Kaneen Advertising and Public Relations will be responsible for public meeting logistics including advertising, coordination with the media, preparation and summary of public comment forms, and preparation of public involvement reports.

Following the public meetings, Summary Report 1 will be prepared, documenting existing and future corridor conditions, deficiencies, needs, and public comments received during the first round of public meetings.

Deliverables:

- Presentation materials and public comment forms
- Four public involvement meetings
- Attendance lists
- Public comment summaries
- Summary Report 1

Task 4 —Develop Evaluation Criteria, Identify Options, and Define Future Facilities and Corridors

Purpose

The purpose of this task is to develop evaluation criteria and “feasibility screens”, develop alternatives, evaluation of alternatives, and recommend future facilities and corridors. The results

of this task will be documented in Working Paper 2, Evaluation of Planning-Level Corridor Definition Alternatives.

Approach

During this task the following major activities will be completed:

- Evaluation Criteria Development
- Alternatives Development
- Performance Screening
- Impact Screening
- Implementation Screening
- Evaluation of Alternatives

Evaluation criteria will be developed to evaluate corridor definition alternatives. Criteria from three broad evaluation areas will be developed including performance, impact, and implementation criteria. The table below shows relevant criteria that will be considered in this study.

Performance Criteria	Impact Criteria	Implementation Criteria
Functional Character and Traffic/Truck Volumes	Regional and Corridor Economic Development Opportunities and Constraints	Funding Options
Regional and Corridor Accessibility and Connectivity	Engineering Opportunities and Constraints	Public Perspectives
Relief of Regional and Corridor Traffic Congestion	Environmental Impacts	Jurisdictional Perspectives
Multi-modal and Inter-modal Opportunities	Land-Use Opportunities and Constraints	Implementation Strategies

Each criterion will be defined to ensure that it can be objectively measured, is sensitive to differences in corridor definition alternatives, and relates to the decisions on State Highway designation and continuation of the highway development process.

Alternatives will be developed for corridor definitions. The Kimley-Horn team will use three principal inputs to the development of alternatives; (1) existing corridor conditions, (2) future corridor conditions, and (3) jurisdictional/stakeholder/public perspectives. Inputs (1) and (2) will come from GIS layers created during Task 2 will identify areas that provide opportunities or constraints for corridors alternatives. Areas with significant adverse impacts or constraints will not be considered as alternatives. Input (3), however is critical since without support from jurisdictions, stakeholders, and the public, there is little reason for designating or developing a corridor as a State Highway. We propose to obtain input from jurisdictions and stakeholders through the inclusive TAC developed by ADOT for this study. The TAC members will be asked to identify a working group of jurisdictional and stakeholder representatives within each community. The Kimley-Horn team will conduct workshops with each working group to identify “politically” feasible corridor definitions and perspectives.

Performance screening will be performed to examine the functional and traffic performance characteristics of each of the corridor alternative. The performance will be evaluated based on criteria for designation of highways onto the State Highway System and planning level traffic analyses of corridor capacity, access, congestion relief, and regional connectivity.

Impact screening will be performed for each alternative. Screening criteria will include physical and engineering, environmental, and land use. A screen of physical and engineering corridor features including roadway conditions, right-of-way, topography, major drainage channels, existing and future development will be conducted to determine challenges and issues associated with corridor development and construction.

The Kimley-Horn team will also review the environmental data compiled in Task 1 to determine the issues and challenges associated with corridor development and constructability from an environmental perspective and make recommendations regarding further environmental study, anticipated regulatory requirements and permitting, and agency/tribal coordination.

Land use impact screens will consider issues of corridor compatibility with jurisdictional development and land use plans. An outcome of this screen is how the various alternatives corridors fit with adopted transportation and land use plans, and what — if incompatibilities are identified — how adopted transportation and land use plans must be modified to accommodate the corridors. We fully understand that the outcome of this screen may be controversial in nature but it will provide a context for political and jurisdictional decision-making which may or may not support development of some corridors.

Implementation screening will be based primarily on the results of public, stakeholder, and jurisdictional perspectives on corridor alternatives and implementation strategies. Implementation screening will also evaluate issues of jurisdictional control of the corridor. This will be accomplished through an assessment of each corridor definition for compliance with State Transportation Board policies on the operational and functional requirements that characterize a State Highway. In addition, planning-level estimates of corridor construction costs will be developed for each corridor definition alternative. Funding options ranging from inter-jurisdictional agreements to private/public partnerships to toll roads will be defined using input from ADOT, the TAC, and benefiting jurisdictions. Evaluation results will be quantified to indicate the support for each corridor alternative and opportunities and constraints to identified funding options.

The results of the proposed screening processes will documented in the form of an evaluation matrix in which each criterion will be given a weighted value relative to its perceived importance. Using the matrix, each corridor option will be scored for its relative performance in each criterion. The weighted total score for each corridor option will help facilitate in the selection of the preferred corridor configuration. The results of the evaluation matrix will be used to develop definitions of "feasible" corridor definitions that will be documented in Working Paper 2, Evaluation of Alternative Corridor Definitions and presented to the public in the second round of public meetings.

Deliverables:

- Evaluation Criteria Matrix
- Opportunities and Constraints Map
- Working Paper 2, Evaluation of Future Corridor Alternatives

Task 5 —Round Two of Public Meetings and Summary Report 2

ADDITIONAL DETAILS ARE INCLUDED IN THE PUBLIC INVOLVEMENT PLAN.

Purpose

The purpose of this task is to conduct public meetings at the same locations for the purpose of obtaining public input on the evaluation of planning-level corridor definitions developed in this study. As part of this task, Summary Report 2 will be prepared, documenting Task 4 activities including development of planning-level corridor definition alternatives, evaluation criteria and methodologies, preferred and feasible corridor definitions, and public comments received during the second round of public meetings.

Approach

This task will implement the public involvement plan approved in Task 1. For the purposes of demonstrating our understanding and approach to public involvement, we propose that the second round of public meetings be conducted in month 9 of the study at four locations and that each meeting present information for both the East Valley Corridor and the Apache Junction/Coolidge Corridor. General locations of the meetings include:

- Apache Junction
- Coolidge / Casa Grande / Eloy
- Queen Creek / Sun Lakes
- Gila River Indian Community

We propose that each meeting include a brief presentation, a questions/answer period, and an open house format for responding to public comments and concerns. The purpose of the second round of public meetings will be to obtain public input on the evaluation of planning-level corridor definitions. During the second round of public meetings information prepared during Task 4 of the study will be presented. Particular attention will be given to corridor definition alternatives, evaluation criteria, and the preliminary results of the evaluations. The same information will be presented at each of the four public involvement meetings. The preparation of public involvement exhibits and presentations will be the responsibility of the Kimley-Horn team. Kaneen Advertising and Public Relations will be responsible for public meeting logistics including advertising, coordination with the media, preparation and summary of public comment forms, and preparation of public involvement reports.

Following the public meetings, Summary Report 2 will be prepared, documenting the development of planning-level corridor definition alternatives, evaluation criteria and methodologies, preferred and feasible corridor definitions, and public comments received during the second round of public meetings.

Deliverables:

- Presentation materials and public comment forms
- Four public involvement meetings
- Attendance lists

- Public comment summaries
- Summary Report 2

Task 6 — Draft Final Report

Purpose

The purpose of this task is to prepare a Draft Final report and accompanying Draft Executive Summary documenting the activities, findings, and recommendations of the study.

Approach

The Kimley-Horn team will prepare a Draft Final Report and accompanying Draft Executive Summary based on the Summary Reports 1 and 2, and public input summary reports. This Draft Final Report will be submitted to the ADOT for distribution to the TAC. All written comments submitted to ADOT and verbal comments received from the TAC during the presentation of materials will be recorded on a Comment Resolution Form. The Kimley-Horn team will prepare a statement of proposed resolution for each comment recorded on a Comment Resolution Form and will review the proposed resolution with the ADOT Project Manager. Once accepted, the proposed resolutions will be used to prepare the Final Report and Executive Summary.

Deliverables

- Draft Final Report
- Draft Executive Summary
- Comment Resolution Form

Task 7 — Final Report

Purpose

The purpose of this task is to finalize the Draft Final Report and accompanying Draft Executive Summary.

Approach

Comments received on the Draft Final Report and Executive Summary will be addressed and finalized.

Deliverables

- Final Report
- Executive Summary